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U. S. NUCLEAR WEAPONS POLICY TOWARD CHINA: 1985-1995

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Prepared for
Director
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could play in the international arena in this period 1985-1995.

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i. <u>introduction</u>

The concern of this report is with the nuclear weapons policy of the United States toward the People's Republic of China. The period of interest is 1985-95. Its primary focus is on nuclear doctrine, specifically the kind of nuclear weapons employment policy that might be required by the United States in that period. The report therefore is particularly concerned with the need to develop an appropriate target selection strategy.

that responsibility properly lies with planners in the Pentagon and at the Strategic Air Command. What the report does is to identify various kinds of circumstances in which the United States might be faced with the need to employ nuclear weapons against Chinese assets, to identify a range of specific nuclear missions associated with those circumstances, and to 'map' the various missions with generic target sets and target categories.

Targeting has in recent years become a subject of keen interest to policy planners. Adoption of the so-called Schlesinger Doctrine in 1974 and Presidential Directive 59 in 1980 were significant turning points in the evaluation of U.S. targeting policy in the post-war period.* The shift is away from countervalue targeting and retaliatory strikes aimed at punishing the adversary toward an emphasis on counterforce attacks and damage derived. Without access to SIOP and other classified targeting documents it is not possible to know how the PRC is "built into" U.S. nuclear war plans,

This is clearly not to argue that China will inevitably become a nuclear adversary of the United States. Current trends suggest a degree of stability in U.S.-Sino relations unprecedented in the post-1949 period. However, power alignments change in international politics and one cannot ignore the possibility of China becoming once again antagonistic toward the United States. China's continuing commitment to the development

A still valuable early statement on the changes is Thomas A. Brown, A New Era in Targeting? WN-88 67-ARPA, Rand Corporation, October 1974.

of nuclear weapons makes it even more necessary for the United States to consider the prospects for nuclear weapons.

Some time ago, in the section of his book entitled "China as a 'Strategic Warfare' Adversary," Thomas Schelling wrote that:

....hardly anyone seems to have thought about what kind of war it would be or ought to be if the U.S. became directly engaged with China... We need to recognize that China as a 'strategic' adversary, could not be taken care of by 'strategic-war' planning that was developed during two decades of preoccupation with the Soviet Union. China is a different strategic problem altogether.*

This report has the objective of trying to help rectify whatever neglect there has been in the target planning community with respect to Schelling's observation. It should be viewed as a potential contribution to laying the groundwork for an appropriate U.S. targeting strategy toward China.

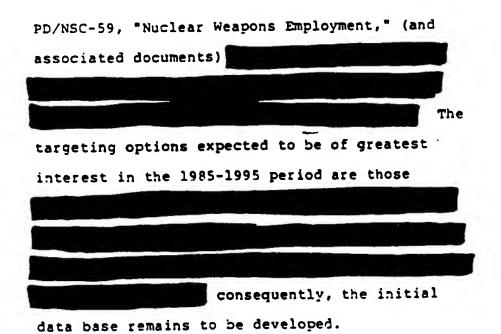
While the immediate concern of the report is with targeting, other dimensions of U.S. nuclear weapons policy are also considered: weapons acquisition and modernization of the specific programs required to support

^{*} Thomas Schelling, Arms and Influence, Yale University Press, New Haven, 1966, P. 185.

primarily the basing of weapons; and national arms control policy, i.e., efforts to regulate arms through various formal or informal understandings. Whatever U.S. targeting doctrine is decided upon regarding China, these other dimensions of policy will need to be addressed as part of the decision process due to the interrelatedness of the various dimensions of policy. The policy challenge is to strive for the highest degree of consistency between and among the different dimensions.

1. SUMMARY OF BASIC FINDINGS

The basic findings of this study are as follows:



Data on Chinese target sets of the kind interest in the study was not

The 'strategic culture' of China is clearly distinctive in terms of fundamental beliefs concerning: the nature of international politics and conflict; the extent to which history can be shaped by rational action; and the kind of strategy and tactics required for dealing with friends and enemies. Identifying the values the Chinese leadership attaches to specific kinds of targets, however,

- Chinese declaratory doctrine on nuclear weapons employment is limited basically to statements about 'first use' (they will not be irst to use nuclear weapons in a conflict outside their own territory) and about the significance of nuclear weapons in international politics (nuclear weapons are 'paper tigers'). The study suggests that the most reliable source for identifying Chinese operational doctrine may be the deployment mode and configuration of the weapon systems.
- Arms control arrangements between the United

 States and the PRC are not considered likely in
 the sense of formal negotiations and agreements.

 However, the study identifies certain initiatives
 that might be undertaken by the U.S. side. For
 example, the Chinese have more strategic leverage
 over Pakistan than does the United States and use
 of this leverage could be encouraged for purposes
 of keeping Pakistan a non-nuclear nation. The
 United States could also assist the Chinese in
 such areas as nuclear weapons security.

2. RESEARCH IMPLICATIONS

The results of this study indicate that further research is needed in the following areas:

Analytical work is needed in developing a target data inventory for China relevant to the 1985-1995 period. The current inventory appears to be in need of updating the upgrading in terms of quality of information on



The Soviet factor in working out a U.S. nuclear weapons policy toward the PRC is critical and needs further study.

Options for developing an arms control dialogue with the Chinese in the years ahead might be designed in the near term, particularly in the area of nuclear proliferation.

II. CHINESE STRATEGIC CULTURE

doctrine are almost exclusively the product of the U.S.-Soviet relationship. The relevance to the Chinese case of such concepts is not evident, and requires careful analysis in developing guidelines for U.S. nuclear policy vis-a-vis the PRC in 1985-95. In developing such policy guidelines it is essential to keep in mind the notion that the objective of defense and warfighting is to force an adversary to do one's will. It follows that it is not what we think will deter an opponent, but what he is, in fact, deterred (or coerced) by that is essential. This suggests that importance of understanding the "strategic culture" of an adversary as it is in this context that views on the role and utility of various forms of military force take on meaning. 1

For a discussion of 'strategic culture' see, inter alia, Ken Booth, Strategy and Ethnocentrism, (1979) and Jack L. Snyder, Soviet Strategic Culture:

Implications for Limited Nuclear Options. Rand Corp. P-2154-AF, 1977.

Strategic culture is a term which refers to the value system of a particular polity or political leadership. It also refers to the particular way a country and its leadership approach strategic issues. Behind the notion of strategic culture is the thought that not all countries share the same values nor approach questions of strategy in the same way. To deal effectively with foreign powers it is necessary to understand the values of each of them individually, how these values affect behavior, and how they differ from one another and from our own value system.

The importance of strategic culture to targeting was implicitly recognized in Presidential Directive 59.

Secretary of Defense Brown stated that the targeting guidance contained in PD-59 attempts to maximize U.S. ability to impose "an unacceptably high cost in terms of what Soviet leadership values most."



'signaling' and other forms of communication where it is vitally important to know what the adversary values most and what kind of targets are most appropriate for accomplishing U.S. strategic objectives.

This chapter will attempt to cast some light on the 'strategic culture' of the PRC as it relates to nuclear targets in China. In order to accomplish this task, four interrelated areas will be examined in turn: 1) priorities in national policy; 2) leadership and authority within the PRC; 3) views on the role of nuclear weapons in national defense; and 4) the nature of the PRC's nuclear weapons capability.

1. PRIORITIES IN CHINESE NATIONAL POLICY

priorities in national policy reflect the relative values current leadership places on competing claims for governmental attention. In the case of China, identification of emphases in national policy provides a rough guide to what the leadership most values, and, accordingly, what targeting options would most threaten them.

The leadership which assumed power after Mao Zedong's death perceived that its precessors had brought the economy to near collapse, with production remaining constant in some sectors and actually declining in others. An ambitious program was advanced to reverse this stagnation and bring China into the ranks of the world's modernized states by the year 2000. Known as the 'Four Modernizations,' it introduced sweeping changes in

agriculture, industry, science and technology, and defense. As a relatively immediate program for the achievement of these goals by the turn of end of the century, a plan for radical improvements by 1985—the beginning of the ten-year period considered by this study—in the four fields ("modernizations") of agriculture, industry science and technology, and defense was outlined by Chairman Hua Guofend in a speech to the Fifth National People's Congress in February 1978.

The 'four modernization' place emphasis on economic efficiency in the form of previously taboo practices, such as economic centralization, incentives to increase productivity, etc. The rationale for economic reform is based on an awareness of the importance of economic strength to national power and the desired goal of becoming a great and modern state. Hua's 1985 plan is an extraordinarily ambitious one, especially in its ramifications for the industrial sector. Steel - production, for instance, was projected to double to a level of 60 million tons annually by 1985. As well, coal production was to double to more than 1 billion tons a year, and oil production was planned to rise throughout by an annual average of 13 percent. Moreover, in that speech Hua announced plans for 120 large-scale modernization or construction projects, among which are:

- . 10 Steel production facilities
- . . 9 Non-Ferrous metal complexes
- . 8 Coal mines
- . 10 Oil and gas fields
- . 30 Power stations
- . 6 New trunk railways
- . 5 Key harbors.

Although full realization of the ambitious plan for national modernization will inevitably require some assistance from the West, the current Chinese leadership has publicly stated that in the pursuit of modernization, China shall remain independent. Indeed, the leadership of the PRC seems intent of playing out its hand as a superpower, however pretentious such claims may be. Economic modernization has emerged as a primary element of China's claim to great power status, as has its nuclear weapons program. 2

Chen Yi, in a 1963 interview, stated China's claim to superpower status. Speaking of the U.S., Yi said "they must recognize that China too is a big country, and one day we're going to catch up with them in strength... China requires a hundred years to become a modern state... In the past, we thought we could do it in ten, but that was wrong. However, our direction is right and our country is united. Huck (1970) p. 66-67.

Premier Hua Guofend stated on May 29, 1980 that China has reasserted its commitment to the development of strategic nuclear weapons in order to break the nuclear monopoly of the U.S. and Soviet Union.

The "steel vs. electronics" debate of 1971 reflected some of the differences within the Chinese leadership which may result in time in a different view of the role of nuclear weapons and the relationship of the defense sector to the overall structure of the economy. The debate centered on the relative merits of building up the steel industry, associated with more conventional means of defense, as opposed to the electronics industry, associated with high technology defense items. A 1975 article criticizing Lin Piao's "one-sided" view of nuclear weapons is illustrative of the doctrinal dimension of this economic debate:

"Lin Piao negated the decisive role played by the masses of the people in a war and denied that the foundation of an army lies in the rank and file... When the imperialists raised a hue and cry about the horrors of nuclear war and engaged in nuclear blackmail, Lin Piao prostrated himself before nuclear weapons... As he saw it, a modern war is fought by pushing buttons and it is new-type weapons, atom bombs and missiles, not infantry, that count."

while China has placed relatively greater emphasis on steel in the 'four modernizations,' the sophisticated technology base for the military will certainly continue to enjoy the support of the national leadership, and will remain a source of considerable prestige for the Chinese as they modernize. leadership suggests that the relevance of symbols of economic modernization, such as modern metallurgical facilities, as potential target categories. The threat of undoing many years of progress towards the goal of joining the ranks of modern superpowers would likely strike a responsive chord in Peking, and enable any nuclear antagonist of China to extract maximum coercive leverage from such a targeting strategy. It is indeed ironic that in its drive to attain superpower status, the PRC is making itself 'vulnerable' to strategic attack by doing away with the inefficient decentralized economic planning mode. 1

2. LEADERSHIP AND AUTHORITY

Of paramount importance in warfare is the cohesiveness and leadership of the polity. The degree to which a particular state is united fundamentally affects the basis of the state as a strategic entity. Among the important elements comprising leadership and authority of a particular society are the degree of homogeneity in its

[&]quot;Everybody knows that under the conditions when both sides have nuclear weapons such weapons pose a much greater threat to the imperialist and social-imperialist countries whose industries and population are highly concentrated." Su Yu, "Great Victory for Chm. Mao's Guideline on War" quoted in Marweb and Pollack, P. 72

population, the nature and tradition of authority patterns, and criteria for the legitimacy of authority. Targeting strategy must take into account such factors in order to assess the way the morale of the populace may be affected by strategic bombing, or the extent to which 'decapitation' or 'regionalization' options may be worthy of consideration. Historically, China has exhibited a great degree of deference to authority, rooted in the Confucian tradition. This respect for authority has not, however, been historically complemented with a high degree of centralized authority; rather, regional 'warlords' formed the focal point of community allegiance.

The institutionalization of modernization in China will likely lead to a reduction in the old "warlordism" tendencies of the past. More and more, it is unlikely that anyone will be able to accrue to his own personal control the myriad levels of power which formed the basis for the "warlords" of the past--the competing influences will be too great for one man or small group.

What may occur in its place, however, is a form of geographic warlordism, in which sectors or areas dominate other regions. The development of the export sector, for example, will create perspectives for coastal regions of China which could well be divergent from the attitudes of the interior. Similar sorts of dominance can be

envisioned for functional reasons. Divergence of perspective and development of competitive goals could lead to schisms within China. Indeed, there is evidence of some regional chauvinism in the competition for industrial expansion even today.

But, for all that, China remains a homogenous ethnic group. Some 95 percent of the population is ethnically Han, while the remaining 5 percent is a diffuse mixture of a variety of ethnic tribes and minorities with no cohesiveness except for the fact they are non-Han. The Han majority is conscious of Chinese history and community, controls the vast majority of the eastern third of China (where nearly all the economic value resides) and supports the Chinese government.

This

is not to argue against the possibility of internal frictions, but simply to avoid casting them as analogous to the Soviet case. 1

The traditional invasion corridors across the Sino-Soviet border are both well known and difficult to control. Many, like the Ili Pass in the west, pass through largely undefended minority group areas which have always been antithetical to the central leadership in Beijing. However, since they constitute only a very small proportion of the total population and economic value of China, the loss of these regions would be more of political impact than national survival. Yet, the sensitive nature of the border regions may suggest a significant coercive potential in targeting such areas. The roots of the sensitivity stem more from proximity to the Soviet Union than from a fear of loss of empire.

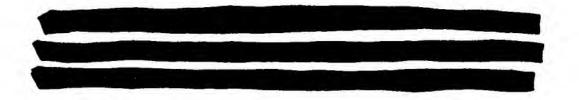
During the first 30 years of the PRC's history, the country was ruled for the most part by leaders whose legitimacy derived from their status as heroes of the revolution. This generation of charismatic leaders is rapidly passing from the scene. For all practical purposes, it will have completely disappeared by the 1985-1995 period covered by this study.

The legitimacy of the rule of their successors will derive not from revolutionary charisma but from the authority of the offices they held. Changes made in the PRC's leadership selection process during the past year would seem to reinforce the concept of loyality to the office holder rather than personality. These include shorter terms of office, with consequently greater turnover of incumbents; greater stress on abstract managerial qualifications for office; downgrading of the cult of personality; and the separation of the work of party and government thus diffusing the concentration of authority.

It is likely that new leaders would take the place of the deceased fairly quickly. Given the unifying effect of external attack, it is probable that these new leaders would command the loyality of most Chinese citizens. The widespread protest movements in China in late 1978 and through 1979, in which several hundred thousand petitioners flocked to Beijing to present their grievances indicate that the central government is indeed regarded as the final source of authority, and as the center of allegiance in a symbolic as well as an administrative sense. The overwhelming majority of protesters sought redress within the existing governmental system rather than the overthrow of the system itself.

Situations may arise in which provincial or lower level leaders could pursue essentially local interests at the expense of a unified national war effort, with consequent weakening of the PRC's capabilities. Recent economic reforms, which have given individual provinces greater autonomy in the management of their finances and creater flexibility in adapting central government directives to local needs, will reinforce existing centrifugal forces within the PRC.

The above statements are necessarily speculative. Much of the reaction of the Chinese population to a large-scale removal of the country's leadership will depend on highly situation-specific variables.





3. THE ROLE OF NUCLEAR WEAPONS

The way in which a country views the role of weapons, and especially nuclear weapons, is perhaps the most explicit indicator of strategic culture. Views on usable and unusable force, the nature of warfare in general and the role of nuclear weapons in particular, the requirements of nuclear deterrence, etc., are all indicators of now a country thinks about, plans for, and

expects to fight a nuclear war. An understanding of this doctrine provides insight into the nuclear logic of the potential adversary.

China's present-day military doctrine is largely traceable to the programs and perspectives originated by Mao and his followers during the Chinese civil war. Then, as now, the concept of "people's warfare," provided the means for supplementing a technically backward army with the one resource China possessed in abundance: her people. This approach to war, with its minimal dependence on technology, required little training for its rural population scattered in self-reliant villages. Capable of sustaining themselves even when isolated, the Chinese combatants could wage a protracted war of attrition. The political will of the masses, rather than technology, was corridered to be determinant of success. Until China's first nuclear detonation in 1964, the principal deterrent factor in Chinese military doctrine was the willingness to trace the resources China commanded in abundance: space, time, and people.

[&]quot;The notion that the masses will prevail applies not only for the political and military defenses of China, but also in the sense that the masses will prevail against their enemies in the world as a whole; to doubt this proposition is to doubt the entire interpretation of history and the role of man from which the present Chinese political system draws much of its moral force." Gelber (1975:18)

Having entered the nuclear fraternity, the Chinese added a concept known to the West as "minimum deterrence." Mao is reported to have stated to Andre Malraux, in 1965 "All I want are six atom bombs. With these bombs I know that neither side will attack me. " China's nuclear doctrine can be inferred from public statements regarding the role of nuclear weapons and the characteristics associated with weapon deployment. China has publicly subscribed to a "no-first-use" policy, has urged the same posture on the other superpowers at various times, and claims to maintain nuclear forces solely to prevent a superpower monopoly. The deployed force is designed with survivability in mind, even from a "bolt from the blue" attack. In addition, China has no allies whose protection is dependent upon an extended deterrent and hence nuclear doctrine need not be constructed to provide such a deterrent.

Mao's dictum "store grain, dig tunnels deep and do not seek hegemony" explains a great deal with how the Chinese view nuclear war and deterrence. Officials of the PRC have stressed that any nuclear attack on China would have to be followed by the invasion and occupation of Chinese territory. Nuclear weapons are thus viewed as one element of the strategic situation. Consonant with Mao's "people's war" concepts, it is pople and not weapons that

decide the outcome of conflicts. The Chinese attempt to "devalue" nuclear weapons in order to maximize their advantage where it is strongest: in conventional defensive battle.

At the same time that nuclear weapons are down played in the overall correlation of forces, the utility of nuclear weapons as a deterrent remains part of Chinese doctrine. The importance of psychological factors plays a central role in Chinese strategic culture. Emphasis on 'peoples' war is an attempt to "psych out" any potential aggressor as is emphasis on the nuclear retaliatory deterrent. The "swaggering" type deterrence philosophy of the Chinese distinguishes it from the U.S. or Soviet Union.

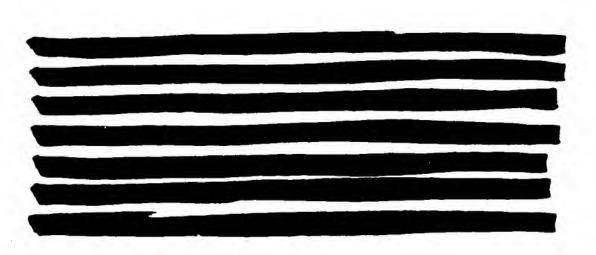
"Whereas U.S. and Soviet writing on nuclear strategy stress that no rational leader would deliberately chose to start a war knowing that victory would not be achieved or that unacceptable damage or national suicide would result, the Chinese emphasize the psychological factors that either lead to or prevent war. In the Chinese view, it is not the larger army but the feelings the aggressor has about the potential victim that either invites or deters war... The concept of an emotionally based deterrent to war dates back to the earliest Chinese strategic writings.²

Gelber, (1975:19) Pollack notes that the "dig tunnels deep" doctrine represent(s) the ultimate form of strategically despising but tactically respecting nuclear weapons and its destructional power." Pollack, (1979:27).

² Pillsbury, (1960:53).

Recent accounts suggest that the Chinese do recognize that they are in a "new historical condition" with the advent of nuclear weaponry, although not as much importance is attached to the decisive role of such weapons as in the West. The recognition on the part of Mao that the PRC would need nuclear weapons in order not to be "bullied in the present day world" indicates that the threat of nuclear weapons is taken seriously. Were the nuclear threat not taken seriously, the Chinese could not be bullied by them, and would have no use for the acquisition of nuclear weaponry. The PRC "minimum deterrent" is based on a recognition of the coercive power nuclear capability represents. A relatively small and survivable nuclear force represents a significant deterrent and provides prestige to the Chinese regime. The importance of conventional forces and "people's war" is continually stressed, as is China's peaceful intent in accuiring nuclear weapons, as evidenced in her "no first ise" stance promulgated since the 1964 detonation.

The importance placed by the Chinese on a secure tetaliatory deterrent, coupled with a doctrinal and pragmatic inability to engage in sophisticated 'limited strategic' warfare planning, suggests that the most threatening targeting option would be



4. CHINA'S MILITARY POSTURE

The military posture of a state reveals a great deal about the kind of war it envisages, its resources and its commitments. An examination of the military posture of the PRC provides insight into its strategic culture, and reflects earlier discussion of the Chinese economic plan, leadership, and nuclear doctrine.

The foundation of China's strategic forces derives from Soviet technology during the 1950's. Under a series of military assistance agreements with China in that decade, the Soviets supplied a GOLF-class submarine, and several Tu-16 medium bombers, in addition to aiding in the development of China's nuclear weapons facilities at Lop Nor and Lanchou. Since the Soviet schism, the Chinese

have moderately extended these technologies and modernized their own facilities for the production of nuclear weapons and delivery systems.

The strategic weapon systems are limited in range capability and thus do not currently present a threat to CONUS or the western Soviet Union. These strategic systems do, however, possess significant strike capability against regional targets and could be used to coerce U.S. allies or challenge U.S. security interests.²

Today, the missile force consists of some 50 CSS-1, 65-85 CSS-2, 4 CSS-3, and, in its final development stages, the CSS-X-4 ICBM. There are no reported SLBMs in the diverse strategic inventory, but development of such a capability has been underway for some years. In addition, China has approximately 100 Tu-16 (Badger) medium bombers, 200 IL-28 (Beagles) and 100 Tu-2 (Bat) light bombers. The Badgers, and perhaps the Bat aircraft, could be capable of nuclear delivery.

See Table 2-1 for a display of Chinese nuclear weapons development 1970-1980, and illustrative extrapolations.

² United States Military Posture for FY81, an overview by General David C. Jones, USAF, Chairman of the Joint Chiefs of Staff, p. 76.

The Military Balance, 1980-1981, IISS, p. 62

CHINA'S NUCLEAR CAPABILITY: 1970 TO 1995

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The surface-to-surface missiles are in essence the only operational leg of the Chinese strategic force. Although modest in size, it is growing slowly and probably does fulfill its minimum deterrence role vis-a-vis the USSR. The force is deployed in fixed and mobile configurations. Conscious efforts to assure survivability of the force are evident, through hardening, dispersal, and deception. The force has also demonstrated a road-transportability, implying that, upon notification, firing units would move to unidentified locations away from normal base areas to execute their firing missions. Alternatively, some rapid-reaction capability may have been built into the force by allowing launch from immediately based areas.

Given the level of technology believed to be exhibited by these systems, they are generally assessed to have an area strike role. Because of the deployment characteristics they could be slow in responding and because of poor accuracy they would not be reliable for targeting hand point targets. From an overall force vantage point, the Chinese SSM inventory today probably represents a credible deterrent to the USSR, China's principal avowed adversary. Indeed, the deployment of China's nuclear forces—near the border with Korea, south and west of Peking and south and west of Outer Mongolia, suggests they are intended to deter the Soviet Union.

The MRBMs, of which these were some 40-50 operationally deployed in 1979, are estimated to have a range of 600-700 miles, but may well be phased out and replaced by IRBMs with ranges of 1,500-1,750 miles. The number of operational IRBMs has been slowly increasing -- in 1979 these were some 50-70 as compared to 65-85 in 1980. The number of MRBMs have not increased. The IRBMs are deployed in locations which put Soviet cities east of the Urals and regions of Central and Eastern Asia within range. The MRBMs are capable of striking at targets only in the eastern-most regions of Soviet territory. 1 Some MRBMs are deployed so far into the interior they could only be used against targets on Chinese soil. The range of the MRBM and IRBM systems, could enable China to apply strong pressure against all peripheral countries including Korea, Japan, Thailand, and India.

A multi-stage ICBM (Inter-continential ballistic missile) with a range of 3,000-3,700 miles and a concomitant capability for reaching European Russia, was first tested in 1976 and some have been deployed.

Recently, two CSS-C-4 ICBMs successfully completed their first maximum range tests. In May, 1980, CSS-X-4 reentry vehicles were landed in the Pacific about 6,400 miles from

The Military Balance, 1980-1981, IISS, p. 61.

the missiles' launch site. China's operational missiles are liquid-fueled, a ircumstance which could complicate handling and storage. To overcome these difficulties, a solid-fueled ICBM is reputedly under intensive development.

Supplied by the Russians before the schism, a Chinese submarine with missile tubes is in operation (a GOLF-Class SSB, but lacking the SS-N-4 missiles associated with that class). No SLBMs (Submarine-launched ballistic missile) appear to have been yet developed for it, though such a program has been underway for several years.

The Chinese apparently have no analogue to the manned bomber element of SAC or to the Long Range Aviation (LRA) of the Soviet Union. Although the Tu-16 force is capable of ranges which carry it into important peripheral areas (including Japan) there are no reports to indicate that the Chinese envision a manned penetrating role for this or follow-on aircraft in time of war. More likely, the aircraft would be used in support of conventional warfighting objectives possibly with nuclear weapons to stem the invasion of Chinese territory.

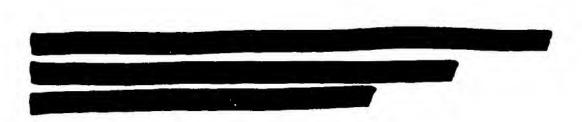
In summary, the complement of China's operational strategic forces over the 1979-1980 period could be enumerated as follows:

Quantity	Type	Designation	Range (nm)
· 2	ICBM	CSS-3	3,000-6,000
50-70	IRBM	CSS-2	1,500-1,750
40-50	MRBM	CSS-1	600-700
90	Aircraft	Tu-16 (medium	2,000
		bombers)	

Prospects for Chinese strategic forces through the year 1995 are for steady improvement in capability and in number of systems deployed. Improved system capability and performance could be achieved as a result of training and experience as well as the introduction of advanced technology. Illustrative of system enhancements are improved guidance, solid fuel propellants, improved mobility, and payload fractionation (MRVs or MIRVs). Indeed, the mode of testing in the 1970s suggests that the Chinese are attempting to enhance the yield/payload ratio. The pace of modernization is expected to be slow for it will be constrained by the competition for scarce technology resources and skills. The strategic systems will be competing for the slowly developing capabilities for research and development, testing and production.

In addition to scarce technical skills and resources, there is a shortage of foreign exchange and an internal objective to avoid dependency on the West. This scarcity

will require difficult policy decisions regarding size and composition of the strategic forces. These decisions would include the mix of IRBMs and ICBMs as well as the mix between bombers, SLBMs and surface-to-surface missiles. Based on the research and production capacity, Chinese military doctrine and their national modernization goals, an expansion in strategic missile quantities by a factor 2 to 3 can be envisioned for an inventory of 200 to 300 surface-to-surface missiles by 1995. Concurrently, improved basing schemes, mobile and fixed site, with the attendant command and control should be expected. Because of competition for scarce technology resources, and in view of the Chinese doctrine and defense posture, it is unlikely that a very large bomber, ICBM or SLBM force will be deployed in 1995. However it can be expected that for perception and survivability of regionally oriented forces SLBM development and deployment will receive priority over the CSS-3 and CSS-4 ICBM programs. Thus the SLBM force could go from zero today to some significant level by 1995 while the ICBM would probably increase from 2 in 1980 to perhaps 40 by 1990. The emphasis with regard to bombers will continue to be on their development and the expansion and modernization of the production base for aircraft of all types.



deployment suggest a continuation, perhaps for the duration of the period under consideration (1985-1995), of a restrained nuclear program, one intended almost solely for the most exigent of circumstances. This projection is based on the recognition that up to now the settled nuclear wisdom among the client elite has emphasized minimum deterrence. To be sure, there are persistent institutional pressures to undertake a more comprehensive and intensive nuclear program. However these pressures are resolved, the highest probability through the mid-1990s is that the notion of minimum deterrence will prevail in view of the needs for maintenance and modernization of Chinese forces, in addition to competing claims in the other areas of the "four modernizations."

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III. SCENARIOS AND TARGETING

The development of a target selection strategy requires some appreciation of the kind of future situations in which the United States could use nuclear weapons against the Chinese. In what follows there is first presented a relatively brief set of scenarios relevant to the 1985-95 time period in which the attempt is made to project some hypothetical conflict situations serious enough to warrant the use of nuclear weapons.

The first scenario considers a possible replay of the Chinese decision to intervene in the Korean War. The fact that Korea remains divided and that the long-range prospects for reunification do not appear particularly high suggests the possibility of U.S. Chinese conflict in the future patterned after events which took place 30 years ago, including the possible use of U.S. nuclear weapons against installations on mainland China.

The second scenario concerns the possible development of a client or proxy state of the PRC in the third world or perhaps even in a more developed region analogous to

the client/proxy status of Albania with respect to China after the Sino-Soviet rupture in the early 1960s. Proxy wars are not an unusual feature of contemporary international relations and there is no reason to believe they will not continue to be a prominent aspect of world politics in the next 20 years.

The third scenario considers the phenomenon of catalytic war. The premise here is that, under certain circumstances the Chinese may be convinced that their single best option in a deteriorating political or military situation would be to incur the risks attendant to trying to precipitate a U.S./Soviet nuclear exchange.

The scenarios are treated briefly because it was not considered productive to expend a great deal of effort describing the development of the scenarios and how the particular crisis might or might not be resolved through the use of nuclear weapons. The uncertainty of the 1985-95 period did not seem to justify a very detailed elaboration of the specific chronologies and decision points.

The decision was therefore made to develop a bounded set of targeting missions (some of which were generated as a result of working through the scenarios) and then to proceed with consideration of which target categories were

consistent with the execution of the missions. As o be expected, it was found that some target ories could serve more than one mission. In the ctive descriptions of the target categories, there is uniform level of detail due primarily to lack of able information.

1. ILLUSTRATIVE SCENARIOS

his section of the report describes a selected number pothetical scenarios in which the United States might reed to use nuclear weapons against the PRC in the 35 time period.

imarily methodological devices for trying to tish the kind of international incidents or crises tould lead to the use of U.S. nuclear weapons against tinese. The scenarios are not the analysts' tions of what is likely to happen in 1985-95. Some scenarios may seem unlikely and to some may lack ility, but crises by definition are typically cted occurrences—few, if any, would have believed early 1960s that within one or two years the world be faced with the prospect of a nuclear war as a of the deployment of Soviet missiles on the island a.

(1) Korean War Re-visited

scenario for the timeframe of interest. To examine this scenario one recalls that Chinese entry into the Korean War was prompted by concern that the war would spill over into China, as well as by a strong commitment—both personal and ideological—to Kim Il Sung. Additionally, China shares a long border with North Korea along the Yalu River, and remains sensitive to the impact that events on the Korean peninsula have on Chinese security. Fear that the South Korean and U.N. (U.S.) forces would attain victory in Korea, coupled with the potential of that conflict extending to China and undermining the embryonic revolution, provided the impetus for Chinese involvement.

Twenty-seven years after the Korean armistice, tensions remain high on the peninsula. Latent political instability in South Korean and uncertain North Korean intentions to exploit any major outbreak of social and political turmoil in the South to militarily effect unification in one of the most heavily armed areas of the world suggests that the potential for renewed Korean hostilities exists.

While initiation of a possible conflict would almost certainly originate in Korea itself, the interests of the Chinese, Soviets, Japanese and the United States would be involved in the execution and termination of another Korean war.

The current and foreseeable Sino-Soviet rift introduces a new factor in the Northeast Asian security equation. Kim Il Sung has mutual defense treaties with both Moscow and Peking. Neither wants to upset the current balance on the peninsula but neither can really control Kim who plays one off against the other. Moscow has traditionally provided more military equipment and assistance to North Korea than has the PRC; the PRC supports Kim Il Sung's cause of national unification, while the Soviets are on record as favoring a "German type" divided country status in Korea. Trends over the past five years have moved Kim Il Sung closer to the Chinese.

Should an inter-Korean conflict erupt, the U.S. would find itself involved immediately, and it is unlikely (though possible) that this would change by 1995. Both, the PRC and USSR would feel constrained to offer aid to North Korea, if only to preserve a position of influence in Pyongyang. The implications

of escalation to strategic nuclear war have provided a strong incentive in the past to avoid direct U.S.-Soviet confrontation. Presumably, this would apply to another Korean war. But would the Chinese be so restrained? The existence of strategic and theater nuclear options with which the U.S. could respond to a confrontation with the PRC would (to an uncertain degree) deter direct Chinese involvement in a renewed Korean conflict; and should Chinese forces enter the conflict, the existence of U.S. nuclear options in the Asian theater would enable the U.S. to convey to the Chinese that the PRC might not remain a sanctuary as it did in 1950-1953.

(2) Chinese Client/Proxy State

In the 1960s western analysts were concerned about the Chinese potential for exporting revolution throughout the third world. That potential was seriously deflated during the turmoil of the cultural revolution and immediate prospects for China making significant diplomatic headway in places like Africa and Latin America appear at this junction to be rather remote.

Should the regime in China sufficiently stabilize itself in the near future, however, it could begin to

look increasingly beyond its borders for the purpose of strengthening its international position vis-a-vis the Soviet Union and the United States. The motivation behind this behavior may not be so much ideological in the sense of trying to develop Communist regimes modeled after the regime in Peking but rather of a more pragmatic nature aimed at strengthening the Chinese economic situation or denying the superpowers on unchallenged monopoly in various geographical regions around the globe.

Regimes in unstable areas like Africa or Latin
America could become in other words client or proxy
states of the PRC. They would either become dependent
on China for military arms yet retain their political
independence or they would become "puppet" regimes of
the PRC with little or no political identity of their
own. In either case, such regimes could become crisis
areas for U.S. military policy, particularly if those
regimes were already anti-American in their political
orientation.

Chinese behavior under such circumstances could conceivably be patterned after the Soviet role in Cuba in the early 1960s. The Soviets deployed missiles in Cuba even though they were no strategic match for the

United States in terms of strategic weapon systems.

In the Cuban missile crisis, there was an apparent
U.S. readiness to consider escalating the conflict, if
necessary, to the targeting of assets of Soviet
territory. Installation of Chinese weapons in some
Latin American country in the 1985-95 period could be
responded to by the targeting of PRC assets in China.

In this connection one can keep in mind the control the Chinese exercised over a submarine base in Albania during the period of the Sino-Soviet rift in the 1960s. Virtually in the backyard of the Soviet Union the Chinese were involved in maintaining a military base of operations miles away from their national territory and with no nuclear weapons capability to deter Soviet actions.

(3) Catalytic War

The Chinese could under certain conditions in the 1985-95 time period decide that the appropriate option for them would be to try to precipitate a nuclear war between the superpowers. One set of circumstances leading the Chinese to contemplate such behavior might be a U.S./Soviet partnership of some kind which the Chinese perceived as directed against China. Another

set of circumstances might be the result of a deteriorating Chinese relationship with either the Soviet Union or the United States, one in which the Chinese were expecting intervention or armed conflict.

For the Chinese the assumption behind initiating a superpower war would be that the war would take place "over the heads" of the Chinese or that damage would be limited to tolerable levels. How prepared the superpowers would be to allow the Chinese to remain outside a superpower nuclear exchange would be a key judgement for the Chinese leadership.

A further risk to the Chinese would be that their attempt would be discovered and punitive actions would be taken by the superpowers, either independently or collectively.

The ability of the Chinese to initiate a catalytic war will depend heavily on such technical factors as the capacity of the United States and the Soviet Union to discriminate between and among different launching platforms and weapon systems.

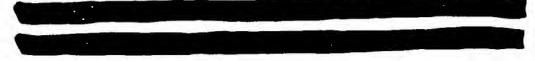
Later in this report there will be a discussion of some of the operational problems planners might

encounter when conducting nuclear strikes against the PRC and in that section the problem of SLBM discrimination will be discussed.

2. MISSIONS AND TARGET CATEGORIES

From the foregoing discussion of the kind of circumstances which could lead to military confrontations, we can deduce that Chinese behavior could be influenced by the possibility of a number of nuclear missions. Though in some circumstances the boundaries between them may become blurred, we can generally delineate them as follows:

Deterrence of inimical Chinese actions



- . Massive retaliation .
- . Disarming retaliation
- . Tit-for-tat response
- . Nuclear operations in a protracted war.

Our task in this section is to identify and characterize categories of Chinese targets appropriate for the fulfillment of these missions and to deduce those implications likely to affect our nuclear policies. In accomplishing this task we will discuss each mission in

turn, considering those generic types of targets likely to provide the greatest leverage in achieving the effects sought in its undertaking and then we will identify specific Chinese target categories that fit the bill. Although there is overlap in the Chinese target categories selected for the missions listed above each mission will be discussed since policy implications are also derived from the requirements for mission execution.

(1) Deterrence of Inimical Chinese Actions

1. Concept Definition

The purpose of deterrence is to dissuade an opponent from unacceptable actions by threatening him with costs so great as to overwhelm any benefits he may expect in undertaking such actions. It follows that nuclear deterrence requires putting at risk those things the opponent's leadership values most. Determining just what these things are apt to be is more difficult in the case of China than it is elsewhere.

There is indeed an argument that Thina is prepared to sacrifice material things--even her population--in pursuit of less tangible values to

a degree unmatched by the West and, in consequence, that deterrence in the usual sense is not an effective ploy. Mao's willingness to sacrifice China's economy, industrial capacity, educational system, party apparatus, and government structure to the cultural revolution in an effort to preserve the spirit of the revolution seems to support such a view. On the other hand, one can argue that Mao acted precisely so as to give up the pursuit of apparent benefits (higher economic growth rates, better institutionalized instruments of control, etc.) to avoid an unbearable associated cost (Chinese bureaucratics and loss of revolutionary elan as exemplified in the USSR). If the things that are truly most important to the leadership can be credibly put a risk, they will be dissuaded by the prospect of their loss.

Moreover, the eclipse of the gang of four has marked a return to more "pragmatic" policies which are more easily understood in the West. While the twist and turn of China's internal political development cannot give us much confidence in projecting the long-term endurance of these policies, its likelihood grows the

longer they remain in effect and the greater their success. The emergence of a new leader as ferocious and stalwart in protecting the revolution as Mao would be surprising in the next 15 years.

Nuclear deterrence simply must constitute a foreign policy tool if our relations with China reach a state where no consonance of views remains and military confrontation characterize our relations. Some degree of deterrent effect automatically flows from our possession of the means to deliver nuclear weapons to the Chinese mainland. A credible, perceptive targeting and declaratory policy will strengthen this effect, and reduce the likelihood of misperceptions which could lead to the actual use of nuclear weapons.

Generic Target Categories

The following classes of things will almost certainly be valued highly by any Chinese leadership likely to emerge in the next 15 years:

- Objects of leadership responsibility,
 e.g. revolutionary continuity, Chinese
 great-power status, and protection of
 population
- . Significant accomplishments achieved through major investments of the leadership
- Military capabilities for self protection and the maintenance of internal order, and
- Leadership continuity.
- No leader could sacrifice such things as these without abandoning his sense of responsibility to his people and to history. The leader that can face such choices--Hitler in his last days, perhaps--is committed to destruction for its own sake and is beyond the reach of rational interaction with the outside world.

3. Relevant Chinese Target Categories

The leadership of the People's Republic of China has been characterized by a deep sense of

responsibility toward the Chinese people and toward preserving the traditions and achievements of the revolution. Key among the latter is the return of China to a position of world power compatible with earlier periods of greatness. The purely cultural aspects of the Chinese historical legacy, such as confucianism, have been regarded coolly by Maoists and, in the excess of the cultural revolution, actually repudiated. There is a clear perception on the part of the current leadership that it has a responsibility not to allow the masses to slip back into "old ways" at the expense of the revolution. What targetable Chinese treasures are the most highly valued in the eyes of the current leadership? The best answer seems to be those material products of the revolution that have served, even if only symbolically, to restore China to its historical position of power and esteem and which have given promise of enhancing and ensuring that position in the future. A list of such things might include the following:

Nuclear weapons production

capabilities: plutonium production

reactors and associated chemical

separation plants, uranium enrichment facilities, and weapons assembly facilities.

- ICBM (CSS-3 and CSS-4), production, test and launch facilities including deployed launchers.
- . Major military installations supporting Chinese deployments along Soviet border; whether or not these and MR/IRBMs would be targeted would depend on the triangular relationship between the U.S., China, and the Soviet Union.
- . Advanced R&D facilities involving defense technology.
- . Major seaports.
- . Major heavy industrial centers.
- Population in 20 most populated cities; though the percentage of total population is low, this represents a particularly valuable element since it

comprises a very large portion of the higher technological skills within China which are assuming growing importance to the leadership. As current policies continue, this population is likely to become the focus of the revolutionary movement. This population is likely to be included in other military and industrial targeting but should be identifiable on its own right as a potential cost and deterrent to unacceptable acts by the PRC.

NCA Relocation Facilities - Though the identification of these would be difficult, the importance of threatening continuity of PRC leadership argues strongly for developing the basis for targeting facilities expected to house and protect key leaders whose loss would disrupt party, government, and military functioning in the aftermath of a U.S. attack.

4. Major Heavy Industrial Centers

The four Modernization agenda calls for an economic system for China based on six major regions--north, northwest, east, central south, northwest and southwest. There are, however, no details on the economic infrastructure planned for these regions.

In earlier years the Chinese government was committed to the decentralization of the country's heavy industry, partly to make it less vulnerable to enemy occupation and partly because the government wished to make the benefits of industrialization more accessible to the country's vast hinterland. The poor performance of heavy industry under decentralization, however, has apparently led the current leadership to aim toward centralizing the country's heavy industry largely according to the six major regions identified above.

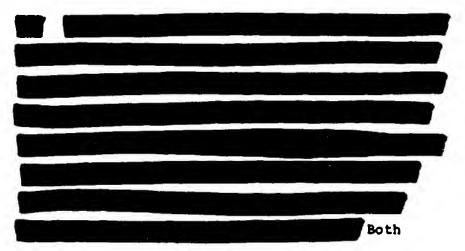
The bulk of Chinese heavy industry is concentrated in the northeast region. The Japanese, who built much of it during their occupation of China more than 40 years ago, chose

the site carefully: the northeast contains important deposits of oil, coal and iron. Because present government programs suggest a greater concentration of resources where they already exist, it is likely that the 1985-95 time period, the northeast region will still be at the forefront of importance in terms of its contribution to Chinese industrial growth.

Geographic centralization could facilitate meeting the targeting requirements posed by the need to deter inimical Chinese actions. Even if the target categories of interest were essentially located in six regions of the country, that would be preferable to a situation where the targets were more uniformally distributed throughout the large land mass of the PRC. To the exent that the northeast region will continue to contain the bulk of Chinese heavy industry in the 1985-95 period, it may be possible in that period to successfully cripple Chinese heavy industry by focusing targeting attention on one geographic region of the country.

(2)

1. Concept Definition



deployed systems and inventories as well as facilities capable of rapidly regenerating the strategic force would be prime targets. Since the numbers of such weapons expected to be in the Chinese inventory during the next 15 years is not large, such an attack is likely to involve the precise targeting by a limited number of U.S. weapons with great importance put on achieving high confidence kill. The acute consciousness developed over a number of years by Chinese leaders of the possibilities

predilections for concealment and deception in

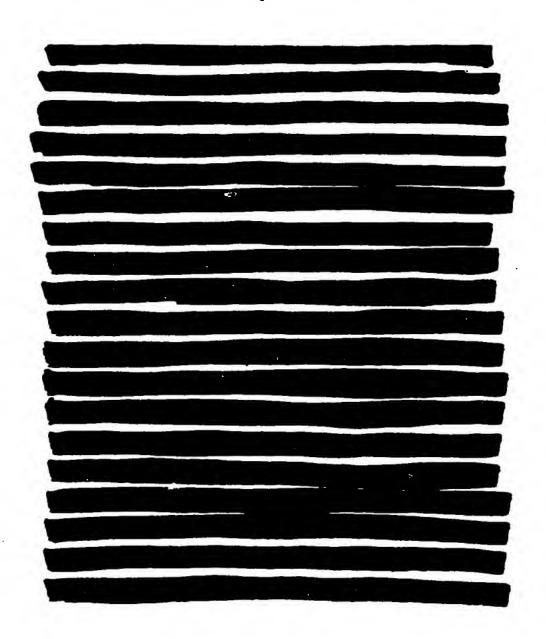
nuclear weapons deployment which could well cause substantial problems in ensuring that all weapons have been destroyed.

2. Generic Target Categories

The following types of weapons systems and reconstitution facilities should be targeted in a strike against PRC strategic nuclear capabilities:

- Deployed strategic weapons capable of delivering nuclear weapons on the United States including strategic C³ nodes controlling their activation and launch and other facilities essential to their use.
- Possible sources of additional weapons in storage or in final stages of fabrication that might be employed in ... the immediate aftermath of a U.S. strike.

Targets identified in the course of continuing post strike reconnaissance looking for extraordinary Chinese measures to deliver nuclear weapons on U.S. Territory.



3. Relevant Chinese Target Categories

At present the number of targets presented by Chinese strategic weapons systems capable of engaging in a nuclear attack on the United States is very small and is not expected to increase dramatically in the foreseeable future. All possibilities that this might occur can not, of course, be ruled out. Currently the PRC policies seem to rely upon the maintenance of a small nuclear deterrent capability, principally to dissuade Soviet military adventures. Most of the weapons systems which have some utility in this regard are not suitable for use against the United States. Though military modernization is one of the "Four," it clearly is not of top priority and within the area of military improvements, strategic weapons are not of foremost concern. Nevertheless, some specific Chinese categories of targets can be identified and some estimates of the location and numbers likely to emerge during the 1990s can be made based on the information in Section 2. The Chinese target categories are:

CSS-4 silos and test range launch facilities, support areas, and final assembly production facilities.

CSS-3 silos and test range launchers support areas, and final assembly production facilities. The CSS-3 is included because its range of 3000-3800 nm would give it some possible utility in attacking Alaskan targets.

Chinese SSBNs - At present only an old converted G-class submarine is at sea with an SLBM launch capability. It is probably only a test platform. Perhaps an SSBN or two is under construction, and more—probably "a few"—will be built during the time frame of concern. Acoustic detection and localization of these submarines is of course uncertain at this point but it is unlikely that Chinese quietening will be so successful in its early models as to make the task impossible. SSBN port facilities also and operational characteristics (deployment patterns, patrol areas) could also be identified.

SLBM production, storage and test facilities. SLBM testing is only now underway and these facilities could be identified.

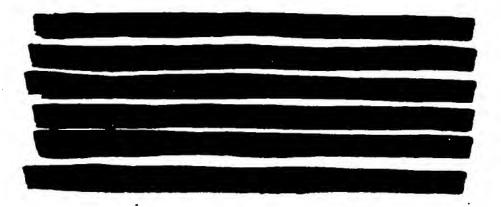
Underground facilities - Because the Chinese have constructed massive underground facilities a prudent planner must consider that considerable quantities of nuclear weapons, delivery system, and other war sustaining material could be stockpiled. Thus a critical requirement is the ability to locate these facilities and achieve a high probability of kill upon the underground facilities.

Strategic aircraft and support facilities - The PRC now has no bomber aircraft capable of reaching the U.S. and is unlikely to have any during the period of concern. Should this estimate prove incorrect however, their targeting will a required.

NCA and key strategic C³ nodes - Because of the importance of denying the use of any portion of Chinese strategic nuclear forces

after U.S. preemptive actions have been recognized, these targets could be important in slowing Chinese response times and thus easing requirements for achieving simultaneity in force destruction. Adequate targeting of all appropriate C³ elements depends on the availability of information needed to do so.

4. PRC Time-Urgent Strategic Targets



ICBMs in the Chinese inventory and projections for the 1985-95 period range from 5 to 60 missiles. This number represents obviously a manageable set of aim points in terms of available RVs but the targeting problem can be expected to be complicated by mobile and deceptive basing modes. Mobility could seriously erode confidence in a sustained ability to locate and accurately pinpoint the launchers. Deceptive basing through such devices as dummy launchers

and camouflage of one kind or another would likewise lower confidence levels associated with executing a preemptive strike.

In addition, fixed or mobile missile

launchers could be deployed in the many steep

canyon areas of north central China, e.g., in the

Lanzhou military district. Mountainous terrain,

coupled with extreme contours, could provide

opportunities for enhanced silo hardness and

possible shielding of weapons effects due to

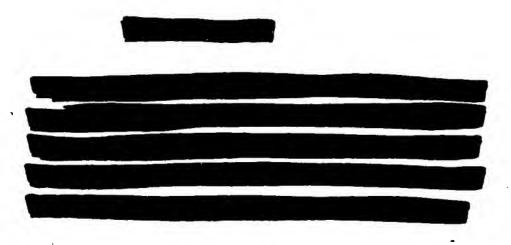
masking by closely spaced peaks and valleys.

1. Concept Definition

It is clear that the geopolitical position of China is such that it can pose very serious threats to close allies of the U.S. in Asia and to U.S. military installations in the region.

Japan and South Korea are notable examples.

Chinese capabilities to mount such threats derive from forces other than those which might threaten U.S. territory with nuclear strikes.



Moreover, Chinese pursuit of a position of Asian dominance will enable it to exert primary influence on the policies and behavior of other states in the region. This would be accompanied with significant possibilities of military moves against key U.S. allies. In either of these cases, the U.S. may need the capability to deny the Chinese both the ability to mount a peripheral nuclear attack and an all-out conventional attack. These represent very

mount a peripheral nuclear attack and an all-out conventional attack. These represent very difficult objectives and are far more scenario-dependent than the other targeting cases discussed thus far.

2. Generic Target Categories

Fulfilling this objective requires the destruction of Chinese nuclear weapons and delivery vehicles capable of peripheral attack. Because the required delivery ranges are not

necessarily large, the Chinese have a large number of suitable vehicles for peripheral nuclear attack. Thus, there is particular value to targeting actual weapons stockpiles whenever possible. The difficulty of targeting these nuclear delivery vehicles is increased because of the ease of concealing and moving them.

It is difficult to target conventional forces with a limited number of nuclear weapons in a way that will prevent their reconstitution over a relatively short period of time. It is possible however to disrupt preparation for a major conventional offensive when its intended thrust is known. Such a move should provide a sufficient period of time to allow the preparation and augmentation of the forces which must counter a Chinese conventional attack. These considerations were taken into account in developing the following list of generic target categories:

- . Peripheral nuclear attack forces
- . Nuclear weapons storage and fabrication facilities

- . Appropriate regional conventional force facilities, depots and marshalling areas
- . Major C³ nodes.

Problems arise in trying to target all specific targets that fit into these categories. Since one objective is to disrupt a conventional attack, it is desirable that some flexibility exists in order that only those facilities and military preparations associated with a specific operation of concern be subjected to nuclear attack. U.S. planmers would be afforded some selectivity in the targeting of deployed Chinese nuclear weapons in early strikes because of the limited range of many of these weapons systems. In a peripheral attack mission only the forward deployed systems would be of immediate value. There are however opportunities, albeit limited, for the Chinese to rapidly move such weapons from one region of China to another. Thus for deterring a regional attack, it would be prudent to target all nuclear systems that might be made available for regional use.

3. Relevant Chinese Targets

The difficulties in developing an economical target list suitable for accomplishing this mission in China are enhanced by observed Chinese practices. It has been reported that short—and medium—range ballistic missiles have been deployed in ways that emphasize their concealment in natural terrain and leave substantial uncertainties about the numbers available for use. Moreover, Chinese operations could include deployment nodes which employ launch sites at substantial distances from missile support bases and in which entire missile units could be moved at prearranged times or upon command.

In a regional conflict, it should also be anticipated that the Chinese could possibly deliver nuclear weapons with their tactical combat aircraft and medium bomber force. Because of substantial uncertainties about the number of weapons in the Chinese nuclear inventory, this broad capability for air delivery, even though it would not be sophisticated, means that it will be difficult indeed to take actions that will assuredly deny the PRC the capability to carry out nuclear attacks on its Asian neighbors.

Recent Chinese conventional military operations, on the other hand, have been cautiously developed over a period of several weeks during which the build-up and its location could be detected. Given basic targeting flexibility, it should be possible to target key marshalling areas and military facilities supporting the build-up.

Specific Chinese target categories

are:

- Nuclear weapons storage and fabrication facilities.
- CSS-1 and CSS-2 deployed sites, missile support bases, and storage and production facilities. As noted above, confidence that all missiles have been targeted will probably not be possible.
 - Medium bomber airfields with particular attention given to those with known nuclear weapons loading facilities.

- Regional marshalling areas, depots and supporting military bases associated with a general force build-up preparatory to conventional attack on peripheral states.
- Seaports likely to play a key role in power projection or for transferring ground forces from one military region to another.
- Airfields located so as to support air operations by the relatively short-ranged tactical air forces of the PRC.
 - Key nodes in the C³ network providing central command and control of the preparations for conventional attack. Though this is a particularly valuable target set that is apt to be quite vulnerable, Chinese C³ networks could very well be dispersed, mobile and otherwise difficult to identify and target successfully.



(4) Massive Retaliation

1. Concept Definition

It is conceivable that in the aftermath of a major Chinese nuclear attack on the United States, the capability for massive retaliation may be wanted. The purpose of such a U.S. response would be to effect punishment by denying the PRC and its leaders any possibility of functioning as a significant world power for the foreseeable future. Its inclusion here is not meant to argue that it is the proper response, a judgment that can only be made at the very highest level of national security policy-making, but to assess its possible impact on U.S. nuclear weapons requirements and policies.

2. Generic Target Categories

Since the objective of massive retaliation is to deny a reasonable future to the state being attacked, it follows that the infrastructure and leadership necessary to such a future must be destroyed along with any identifiable mechanism that will support their early reconstitution.

Generic target categories include the following:

- Leadership continuity including command and control mechanisms
- . Key military installations and forces including C³ networks and defense-industrial facilities
- Basic heavy industrial and chemical plant fertilizer
- Light industrial plants, transportation and communication sectors
- Agricultural industry

- Major cities including centers of the party, government, and military bureaucracies
- . Major seaports
- . Major power-generation installations.

Relevant Chinese Target Categories

The actual targets would derive from the Chinese targets identified in earlier paragraphs. While the scope would include military, industrial and cultural target categories, the number of such targets would be limited by the inventory of available U.S. weapons.

4. Major Power Generation Installations

At present, China has about 90,000 power plants but most of the power (specific percentage are not available) is generated by several hundred stations. The PRC seems to be leaning toward increasing capacity through a mix of hydroelectronic and coal-fired plants that will

balance the local availability of water power and coal with a construction pace congruent with its overall modernization effort. China has the world's largest hydroelectric resources and is undertaking a massive program to construct hydroelectric power stations.

From a targeting perspective it is important to note that the hydroelectric resources in China are not for the most part co-located with Chinese heavy industry--most of the resources are found in remote areas in western China. However, the Chinese already have the technology necessary to transmit hundreds of thousands of megawatts from these remote areas to their major industrial centers.

How many power stations will supply the bulk of China's power requirements in the decades ahead is uncertain. Advances in technology could result in a number less than the several hundred which perform that task today.

(5) Disarming Retaliation

1. Concept Definition

On the other hand, it may be concluded that disarming retaliation is a more suitable response to a Chinese attack on the United States. In such an event, the objective would be to end any Chinese nuclear initiatives by destroying the nuclear forces and their production facilities.

2. Generic Target Categories

Target categories appropriate for pursuing this objective are

3. Relevant Chinese Target Categories

Since, in this scenario, the Chinese would have had an opportunity to prepare their nuclear forces for use and may have moved or concealed them, the problem of targeting peripheral nuclear attack forces is even further complicated. Rapid and

focused reconnaissance prior to attack on remaining strategic nuclear forces would minimize the number of weapons required to attack them. The number of targets involved is likely to be so small, however, that it would also be feasible albeit wasteful, to re-attack the entire target set without any reconnaissance whatsoever.

(6) <u>Tit-for-Tat Response</u>

1. Concept Definition

It is conceivable that we may wish to react to an unacceptable act by the PRC with a very limited, symbolic nuclear attack. This limited attack could be intended to deprive Chinese leadership of a highly valued target in order to demonstrate our acute displeasure, our willingness to take responsive actions, and our readiness to negotiate a resolution of the conflict. This approach is perhaps reflective of the Chinese approach as illustrated in dealings with the Soviet Union wherein they urge strong reactions to ojectionable behavior.

Generic Target Categories

Because this concept involves slapping one's protagonist where it really hurts but with high selectivity, it is appropriate that a selection be made from among those potential targets apt to be most treasured by the leadership. These potential targets have, of course, been developed in treating the deterrence case above.

3. Relevant Chinese Target Categories

there. The targeting problem in pursuing this objective is essentially one of selecting a Chinese target that is peculiarly appropriate to the stimulus in terms of severity, collateral damage possibilities, the specific segment of Chinese society affected by its destruction, symbolic relationship to the unacceptable act, etc. The range of targets identified as being of high value of the leaders of the PRC should provide ample opportunity to make such a selection.

(7) Nuclear Operations in a Protracted War

In a protracted war which brings the armed confrontation of the PRC and the United States the use of nuclear weapons may be urged by tactical circumstances. Nuclear operations could emanate from a conventional conflict by the anticipation of the conflict's moving to a stage which seems to require preemptive actions to protect the U.S. or its close allies from nuclear attack. Preparation by the United States for the use of nuclear weapons in such circumstances would thus require both suitable tactical nuclear forces and the ability to undertake attacks discussed above.

The type of weapon employed (tactical or strategic) in nuclear operation in a protracted conventional war in the theater would be influenced by such policy considerations as basing rights, arms control range limitations, and third country overflights. These and other policy issues deriving from missions and Chinese target categories are presented in the next chapter.

IV. IMPLICATION FOR NUCLEAR WEAPONS POLICY

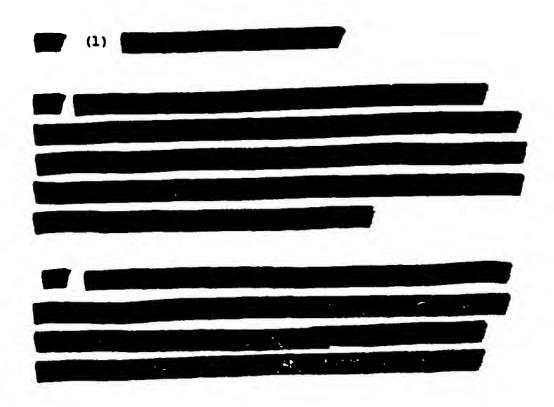
The preceding sections have attempted to address the unique considerations relevant to dealing with China as a nuclear adversary in the 1985-95 time frame. The 'strategic culture' of the PRC was addressd, as were varius scenarios which illustrate potential nuclear confrontation between the two states. We also have postulated varius generic kinds of nuclear responses which the U.S. may want to consider, along with illustrative examples of generic target categories and examples of specific target sets. In this section, we examine the operational constraints on targeting China and the implications of our findings for U.S. national security policy, with special reference to acquisition and modernization, employment, deployament and arms control.

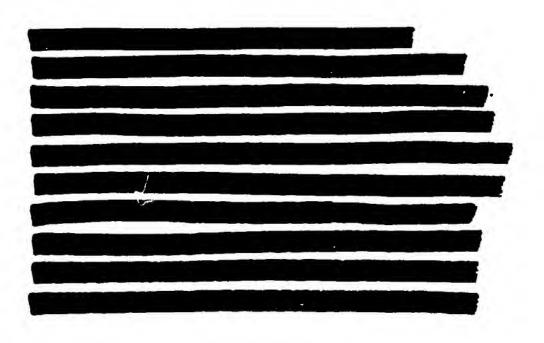
1. OPERATIONAL CONSTRAINTS ON TARGETING

In considering targeting options, planners cannot assume a totally free hand in determining the appropriate matching of weapons with targets. There are, in other words, constraints of limitations on the use of certain

weapon systems which must be taken into account when planning a nuclear weapons targeting strategy.

This section of the report describes some possible constraints in the case of targeting China. The list is not to be considered exhaustive but it probably does represent the most important of the considerations facing the planning community. A determined effort is needed by those directly reponsible for designing nuclear war plans to examine in much greater detail the seriousness of the constraints listed below for the period 1985-95 and how the United States may be able in that period to devise ways to overcome or minimize their potential impact.



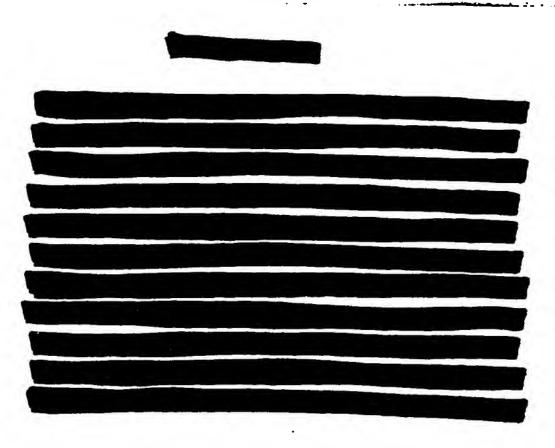


(4) Hard Target Kill Requirements

The hard target kill requirements for 1985-95 should not be particularly difficult to meet. However, there may be in the time period of interest more than a few score targets in China which might require weapons with very low CEPs and, in some cases, earth penetrating warheads may be the most appropriate kind of weapons to employ.

(5) Soviet Preparedness to Intervene in China

Any U.S. nuclear operation against China will take place against the background of latent or overt Soviet hostility toward the Chinese.



In fact, under most circumstances it may be advisable to purposefully leave un-targeted those PRC weapons systems considered to be dedicated to the destruction or engagement of Soviet forces for the purpose of deterring aggressive Soviet behavior.

2. POLICY IMPLICATIONS

So far the research has focused on targeting. But targeting is not the only dimension of U.S. nuclear weapon policy. Other dimensions of U.S. nuclear policy, all of which are related in some degree to targeting policy, include the following:

- . Research and development and acquisition programs
- . Weapons deployment
- . Weapons employment doctrine
- . Arms control approaches and objectives.

Each of these policy issues are closely related and decisions in one area could have decisive impact on considerations and decisions in other areas. The following analysis considers each issue in-turn without prejudicing the cause-effect relationship or the prioritization of the issues. Throughout the presentation of the analysis the relationships among the issues are discussed.

(1) Weapon Modernization and Acquisition Issues

Modernization and acquisition policy refers to those decisions concerned with the qualitative and quantitative aspect of nuclear force posturing.

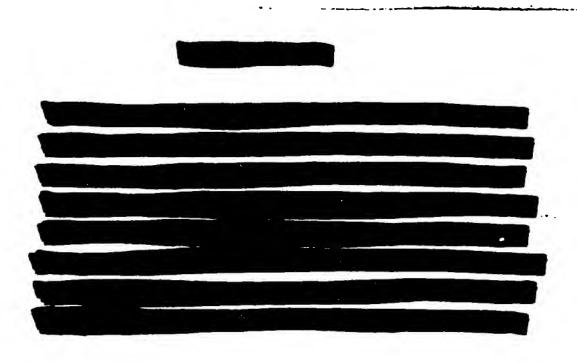
Technical modifications which would, for example, improve the system survivability, reliability, or damage expectancy would be modernization decisions which enhance overall nuclear force effectiveness. At the same time, however, decisions to proceed with such improvement areas would affect employment doctrine and perhaps arms control opportunities.

Similarly,

quantitative expansion of the nuclear force could be at variance with existing arms control agreements or opportunities for new arms control initiative.

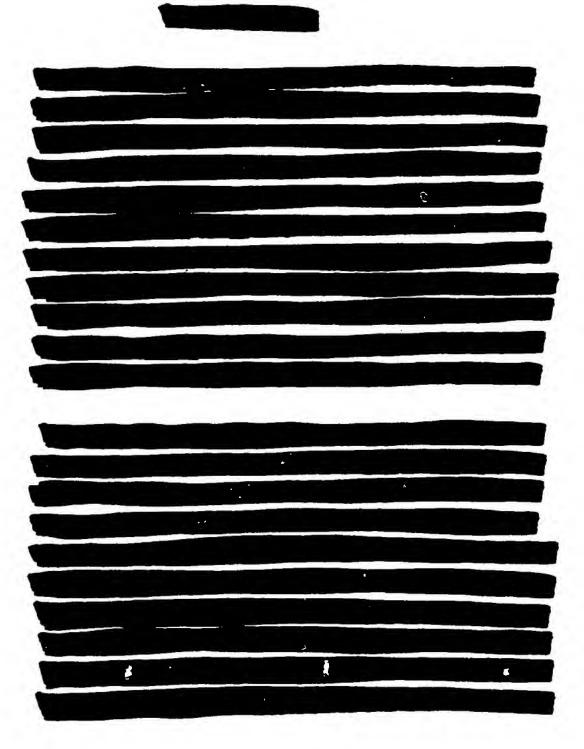
Concurrently there are no modernization or acquisition programs dedicated to satisfying the requirements of the relevant Chinese target categories.

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(2) Weapons Deployment

Weapons deployment policy decisions are primarily concerned with the location of weapons systems (CONUS-based or forward-based) and the mode of deployment -- land, sea or air delivery systems. Many factors are based on the deployment location decisions. Chief among these factors are the relationship of the China target package to the U.S. strategic nuclear forces,



Associated with the deployment policy decision are implications and considerations pertaining to employment doctrine and arms control policy. If

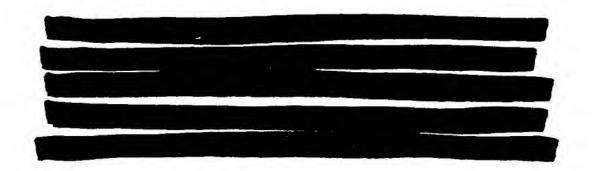
regional delivery systems, especially sea-based platforms, are allocated to the China target package, they could be routed to other trouble spots in times of crisis. Fixed regional assets could be extended range Pershings or GLCMs stationed in Korea. There could be arms control implication with any decision pertaining to launch platform and delivery mode. For strategic systems, the aggregate limitations could affect system availability for dedication to a China package. Also, range limitations imposed on cruise missiles under SALT or LRTNF could preclude the regional deployment of nuclear forces for a China target package.

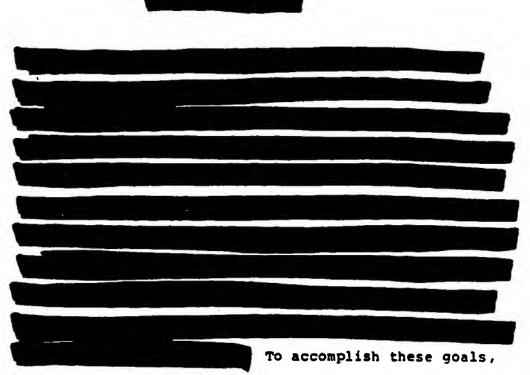
(3) Weapons Employment Doctrine

Employment policy decisions pertain to questions of how and under what circumstances nuclear weapons are to be used. Doctrinal issues are fundmental to this decision and target sets and weapon allocation plans represent the implementing factors. For example, assured destruction doctrine with its policy of deterrence and retaliation requires that the U.S. weapons be capable of targeting and destroying the adversary's population and industrial capacity. Such a doctrine may not be suitable with regard to China

because of its large population and the dispersion of industrial and agricultural capacity at least through the mid 1990s.

The U.S. commitment to a policy of deterrence has been steadfast since it was espoused in the early 1960s. Although the doctrine continues to be stated in terms of inflicting "unacceptable" levels of damage upon the Soviet Union's population and industry an added dimension was introduced by Secretary of Defense Schlesinger in 1974. The Schlesinger doctrine of flexible response provides for limited strategic responses below the level of a total retaliatory attack on population and industry. This doctrine provides the flexibility needed to deter or to respond to limited first strikes. This doctrinal concept is vital in formulating U.S. policy with regard to China because of the spectrum of inimicable Chinese activity that could require a nuclear response by the United States.





according to Secretary of Defense Brown, the U.S. forces must be capable of imposing "... an unacceptably high cost in terms of what the Soviet leadership values most -- political and military control, military power, both nuclear and conventional, and the industrial capacity to sustain military operations."

In contrast to the voluminous literature and detailed description of doctrinal issue regarding the Soviet Union, there is little, if any, unclassified writings on U.S. nuclear doctrine regarding China.

l Air Force Magazine, October 1980, p. 21.

However, the analysis and matching of relevant Chinese target sets with specific U.S. objectives reveals similarity and parallelism between the U.S. doctrinal issues vis-a-vis the Soviet Union and the doctrinal issues related to China. Flexible responses and escalation control over a wide range of Chinese activity inimicable to the United States is essential. Significant with respect to China is the nuclear force contribution to deterrence of Chinese conventional aggression. This significance stems from the Chinese military doctrine which for the foreseeable future does not focus on nuclear weapons. Rather, in keeping with the basic doctrine of the PLA, its Chinese rely on their manpower advantage and the infusion of modern weapons into the military forces over the next 10-15 years.

Thus for escalation control primary targets would include Chinese nuclear delivery systems (e.g., ICBMs, IRBMs, and bombers) as well as those targets which serve to sustain military aggression (e.g., depots, transportation facilities and command and control). In response to Chinese coercion of U.S. allies or Chinese interference with U.S. vital interests, real-time targeting decision could be made based on existing conditions. Nuclear weapon test and

production facilities, energy sources, minerals and processing plants illustrate the flexible response option. Target selection would, of course, be driven in large measure by the opportunity for collateral damage within and beyond the Chinese borders.

(4) Arms Control

Arms control policy decisions pertain to the approaches of governments to individually or collectively regulate the levels and kinds of armaments already existing or possible in the future. As a nation, the United States is committed to equitable, verifiable arms control measures which contribute to stability and reduce the potential for the outbreak of nuclear war. While the U.S. is committed to this course of action, China is not ready to participate in strategic and/or tactical nuclear arms control negotiations. The Chinese nuclear weapon inventory is too small and China has been critical of the SALT process. Also, China's view of the Soviet pursuit of hegemony and China's concern over Soviet aggression would not be conducive to regional nuclear arms control negotiations.

U.S. with regard to arms control and China. The primary area of concern is the effect of the U.S.-Soviet arms control measures on our ability to develop and deploy nuclear delivery system for engaging relevant Chinese targets. The second area of concern is to identify the opportunities for dialogue with China in order to encourage their participation in meaningful ways to control and safeguard inventory of Chinese nulcear weapons.

The qualitative and quantitative constraints of the SALT II agreement could impact the U.S. targeting capability against China. Significant among the qualitative restrictions would be the 600km range limitations on ground-launched and sea-launched cruise missiles. Such constraints are included in the protocol to the SALT II Agreement. Although the protocol would only last through December 1981, the precedent is established for range limitations or tactical or theater based systems.

Under the SALT II Agreement the maximum range for air launched cruise missiles (ALCM) is 2500km and all ALCMs with ranges over 600km could only be deployed on heavy bombers which would count under the aggregate

limit. Thus, SALT II would impose significant constraints on cruise missiles, perhaps the most appropriate system for targeting China. Because of the location of targets within China and because of their orientation with respect to the Soviet Union and other countries, SLCMs would be an effective weapon system. Such systems deployed under CINCPAC would avoid overflight of the Soviet Union, would not pose a discrimination problem for the Soviet Union, and could be of sufficient range (without arms control constraints) to put at risk all critical targets identified early in this report.

In addition to the precedents being established in the SALT negotiation, there is underway a multilateral arms control negotiation on the long range threater nuclear forces (LRTNF). This forum includes the United States, its NATO allies, and the Soviet Union. Subject to negotiation and limitation are the same tactical or regional systems that would be available for U.S. deployment in Asia for employment against targets in China.

These are the U.S. arms control initiatives that need to be weighed against potential weapon employment requirements of the future. Additionally, we need to

Chinese into arms control negotiation. While quantitative and qualitative arms control measures may be premature for China to accept, other issues provide opportunities for dialogue. These include approaches for safeguarding nuclear weapons, restricting proliferation, and promoting underground testing. These initiatives can be pursued in the context of existing agreements or treaties. For example, the Non-proliferation Treaty, the Accidents Agreement, and the Hotline Agreement offer opportunities for Chinese initiatives in arms control. Collectively, such arms control initiatives could shape the requirements and the developments of U.S. nuclear weapons policy.

V. BIBLIOGRAPHY

- 1. Baltimore Sun, "Brown Tells Peking U.S. is Ready to Cooperate if Security is Threatened," January 7, 1980, p. 2.
- 2. Booth, Ken, Strategy and Ethnocentrism, Holmes & Meier, New York, 1979.
- 3. Brown, Thomas A., A New Era in Targeting?, RAND Corp., WN-8867-ARPA, 1974.
- 4. The Chinese War Machine, A Technical Analysis of the Strategy and Weapons of the People's Republic of China, Crescent Books, New York, 1979.
- Defense Intelligence Agency, <u>Handbook of the Chinese</u> <u>Armed Forces</u>, DDI-2680-32-76, July 1976.
- 6. Department of Defense Annual Report Fiscal Year 1981, U.S. Government Printing Office, Washington, D.C., January 1980.
- 7. Department of State, <u>U.S. Policy Toward China</u>, <u>July 15, 1971 - January 15, 1979</u>, Selected Documents No. 9 Publication 8967, Washington, D.C., January 1979.
- 8. Foreign Broadcast Information Service, China (Various Daily Reports).
- 9. Gelber, Harry, "Nuclear Weapons and Chinese Policy,"
 Adelphi Paper No. 99, International Institute for
 Strategic Studies, 1973.
- 10. Heaton, William R., Jr., "A United Front Against Hegemonism, Chinese Foreign Policy into the 1980s, National Defense University, Monograph Series 80-3, March 1980.
- 11. Huck, Arthur, The Security of China, Chatto & Windus, London, 1970.

- 12. Marwah, Onkar, and Pollack, Johnathan D., Military
 Power and Policy in Asian States: China, India, and
 Japan, Westview Press, Boulder, Colorado, 1980.
- 13. The Military Balance 1980-1981, The International Institute for Strategic Studies, London, 1980.
- 14. National Foreign Assessment Center, China: The Steel Industry in the 1970s and 1980s, Central Intelligence Agency, May 1974.
- 15. National Foreign Assessment Center, Chinese Coal Industry: Prospects Over the Next Decade, Central Intelligence Agency, February 1979.
- 16. National Foreign Assessment Center, <u>Electric Power for Chinese Modernization:</u> The Hydroelectric Option, Central Intelligence Agency, May 1980.
- 17. National Foreign Assessment Center, "Military Organizations of the People's Republic of China," Central Intelligence Agency, CR 80-10320, April 1980.
- 18. New York Times, "Pentagon Studies Prospects of Military Links with China," January 4, 1980, p. 2.
- 19. Pillsbury, Michael, "Strategic Acupuncture," Foreign Policy, Winter 1980-81.
- 20. Pollack, Johnathan D., "The Logic of Chinese Military Strategy," The Bulletin of the Atomic Scientists, pp. 22-33, January 1979.
- 21. Pye, Lucien W., "Dilemmas for America in China's Modernization," International Security Program for Science and International Affairs, Harvard University, Summer 1979.
- 22. Schelling, Thomas, Arms and Influence, Yale University Press, New Haven, 1966.
- 23. Snyder, Jack L., Soviet Strategic Culture:
 Implications for Limited Nuclear Options, RAND Corp.,
 R-2154-AF, 1977.

- 24. Treverton, Gregory, The Future of Strategic Deterrence
 Part 1, Adelphi Paper 160, IISS, London, 1980.
- 25. United States Military Posture for FY81, an overview by General David C. Jones, USAF, Chairman of the Joint Chiefs of Staff, U.S. Government Printing Office, Washington, D.C.
- 26. U.S. Congress, Allocation of Resources in the Soviet Union and China 1979, Hearings before the Subcommittee on Priorities and Economy in Government of the Joint Economic Committee, 96th Congress, 1st Session, June 26 and July 9, 1979.
- 27. U.S. Congress, <u>Playing the China Card</u>: <u>Implications for United States-Soviet-Chinese Relations</u>, <u>Report prepared for the Subcommittee on Asian and Pacific Affairs of the Committee on Foreign Affairs</u>, U.S. House of Representatives, by the Congressional Research Service, Library of Congress, October 1979.
- 28. U.S. Congress, <u>Sino-American Relations: A New Turn</u>, a Trip Report to the Committee on Foreign Relations, U.S. Senate, 96th Congress, 1st Session, January 1979.
- 29. U.S. Congress, The United States, China and Japan, a Report to the Committee on Foreign Relations, U.S. Senate, 96th Congress, 1st Session, September 1979.
- 30. The Washington Post, "Brown, Chinese Reportedly Find Convergence' of Views," January 8, 1980.
- 31. Whiting, Alan S., The Chinese Calculus of Deterrence, University of Michigan Press, Ann Arbor, 1975.